

ALL PROCEDURES RECOMMENDED FROM SCAFFOLDING, SHORING & FORMING INSTITUTE, INC. SHOULD BE FOLLOWED AT ALL TIMES.

GENERAL NOTES

THIS DRAWING IS PROVIDED AS A SERVICE TO ILLUSTRATE THE ASSEMBLY OF CMCCS PRODUCTS ONLY. IT IS NOT INTENDED TO BE FULLY DIRECTIVE NOR COVER ENGINEERING DETAILS OF SUCH PRODUCTS OR EQUIPMENT OR MATERIALS NOT FURNISHED BY CMC CONSTRUCTION SERVICES (CMCCS) NOR THE INTERCONNECTION THEREWITH. INASMUCH AS CMCCS DOES NOT CONTROL JOB SITE ASSEMBLY OR PROCEDURES, GRADE OR QUALITY OF MATERIALS OR EQUIPMENT SUPPLIED BY OTHERS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INTEGRATE THIS DRAWING INTO A COMPOSITE DRAWING SUITABLY COMPLETE FOR CONSTRUCTION PURPOSES CONSISTENT WITH SAFE PRACTICE AND OVERALL PROJECT OBJECTIVES.

CMCCS SHALL NOT BE RESPONSIBLE IN THE EVENT OF ANY DEVIATIONS, CHANGES OR ALTERATIONS TO THE RECOMMENDED ASSEMBLY DETAILS DESCRIBED IN THIS DRAWING UNLESS SUCH DEVIATIONS, CHANGES OR ALTERATIONS ARE ILLUSTRATED IN A REVISED CMCCS DRAWING OR ARE APPROVED IN WRITING BY AN AUTHORIZED CMCCS REPRESENTATIVE.

NOTE: RESPONSIBILITY FOR THE FINAL FORMWORK DESIGN AND PLACEMENT REMAINS WITH THE CONTRACTOR.

- ALL DIMENSIONS AND DETAILS SHOWN ON THIS LAYOUT MUST BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.
- THE SHORING SYSTEM SHOWN ON THIS LAYOUT IS BASED ON A CONCRETE WEIGHT OF 150 POUNDS PER CUBIC FOOT.
- THE DESIGN LAYOUT INCLUDES AN APPROPRIATE ALLOWANCE FOR FORM WEIGHT PLUS A LIVE LOAD OF 50 POUNDS PER SQUARE FOOT WHICH DOES NOT INCLUDE PROVISIONS FOR MOTORIZED CONCRETE EQUIPMENT.
- APPROXIMATE AMOUNTS OF SCREW JACK EXTENSIONS HAVE BEEN NOTED. THESE EXTENSIONS MAY REQUIRE ADJUSTMENT DUE TO FIELD CONDITIONS, HOWEVER, THE MAXIMUM SCREW JACK EXTENSION FOR THIS LAYOUT IS LIMITED TO A TOTAL OF N/A INCHES (TOP + BOTTOM IF APPLICABLE).
- SUITABLE SILLS MUST BE PROVIDED TO PROPERLY DISTRIBUTE LOADS IMPOSED BY SHORING OVER THE GROUND OR SUPPORTING FOUNDATION TO ASSURE ADEQUATE STABILITY FOR ALL SHORING LEGS.
- ALL STRINGERS, LEDGERS, OR OTHER MEMBERS RESTING ON CMCCS EQUIPMENT MUST BE CENTERED DIRECTLY OVER THE SHORING LEGS, UNLESS DESIGNED OTHERWISE.
- IN SETTING ELEVATIONS, ALLOW FOR LUMBER COMPRESSION.
- THE FORMWORK LUMBER DETAILS SHOWN ARE SUGGESTED SIZES AND ARE BASED ON ANSI/AF AND PA NDS - 2005 RECOMMENDATIONS FOR VISUALLY GRADED SPRUCE-PINE-FIR No. 1 and 2 OR BETTER WITH A MAXIMUM MOISTURE CONTENT OF 19%. (USE WET SERVICE ADJUSTMENT FACTOR

UNADJUSTED STRESS VALUES FOR ABOVE LUMBER:
 EXTREME FIBER STRESS IN BENDING - $F_b = 875$ psi
 HORIZONTAL SHEAR - $F_v = 135$ psi
 BEARING PERPENDICULAR TO GRAIN - $F_p = 425$ psi
 MODULUS OF ELASTICITY - $E = 1,400,000$ psi

- PLYWOOD DESIGN IS BASED ON AMERICAN PLYWOOD ASSOCIATION RECOMMENDATIONS WITH THE FACE GRAIN OF THE PLYWOOD RUNNING AT RIGHT ANGLES TO IT'S SUPPORT.
- THE SHORING SYSTEM, AS SHOWN, IS DESIGNED ON THE ASSUMPTION THAT FORMWORK WILL BE RESTRAINED FROM LATERAL MOVEMENT BY THE CONTRACTOR. SUFFICIENT LATERAL SUPPORT MUST BE PROVIDED WHERE NECESSARY TO PREVENT THE IMPOSITION OF LATERAL LOADS ON THE SHORING SYSTEM.
- THE SHORING EQUIPMENT ILLUSTRATED ON THIS DRAWING MUST BE ERECTED IN ACCORDANCE WITH CMCCS APPLICATION GUIDES, SAFETY/APPLICATION SHEETS AND THE APPLICABLE SCAFFOLDING, SHORING INSTITUTE PUBLICATIONS, WHICH ARE TO BE CONSIDERED AN INTEGRAL PART OF THIS DRAWING.

- GUIDELINES FOR SAFE PRACTICES FOR ERECTING AND DISMANTLING OF FRAME SHORING.
- RECOMMENDED STEEL FRAME SHORING ERECTION PROCEDURE.
- SINGLE POST SHORE SAFETY RULES.
- HORIZONTAL SHORING BEAM SAFETY SHEET.
- GUIDE TO HORIZONTAL SHORING BEAM ERECTION.
- FLYING DECK FORM SAFETY RULES.

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13. ALL STRINGERS MUST BE SECURED TO U-HEADS WITH CLAMPS OR ANY OTHER APPROVED MANNER.

14. RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE THOROUGHLY CHECKED BY THE ARCHITECT AND/OR ENGINEER TO DETERMINE PROPER PLACEMENT AND REMOVAL, AND THAT SUFFICIENT CAPACITY EXISTS TO SUPPORT THE AREAS BEING RESHORED.

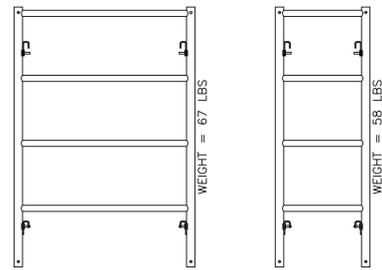
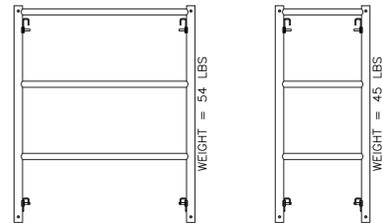
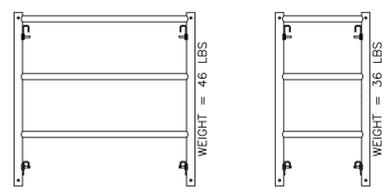
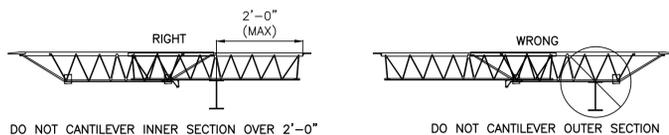
15. THE MAXIMUM TOTAL LEG LOAD* FOR BB, B12, B14 AS ILLUSTRATED ON THIS DRAWING IS N/A LBS. CALCULATED BASED UPON:
 CONCRETE = 150 pcf
 LIVE LOAD = 50 psf
 DEAD LOAD = 10 psf
 THE MAXIMUM ALLOWABLE LOAD ON THE AFOREMENTIONED LEG IS N/A LBS.

* (TOTAL LOAD = CONCRETE + LIVE LOAD + DEAD LOAD)
 THE ALLOWABLE LEG LOADS ON SHORE TOWERS INCLUDE 2.5:1 SAFETY FACTOR. THE ALLOWABLE LEG LOADS ON POST SHORES INCLUDE 3:1 SAFETY FACTOR.

SHORING DESIGN BY CMC CONSTRUCTION SERVICES - PLYWOOD DECKING SUPPLIED BY OTHERS

The support spacing for the plywood for the deck forming is CMCCS suggestion only and has been designed in accordance with the recommended method in the current edition of the APA Publication, PLYWOOD FOR CONCRETE FORMING. The limit of deflection used in the design is L/360.

The plywood design is based on concrete weight plus the live load shown on this drawing and makes no allowance for impact from falling concrete, for concrete piling up, improper joist and plywood placement and fastening, adverse moisture conditions (i.e. cold weather heating) or other factors over which CMCCS has no control. Accordingly, CMCCS cannot accept responsibility for plywood performance or other designs as actually constructed.



SHORE FRAME TOWERS

LENGTH	WEIGHT	10'	40 LBS
21'	84 LBS	9'	36 LBS
18'	72 LBS	8'	32 LBS
16'	64 LBS	7'	28 LBS
14'	56 LBS	6'	24 LBS
12'	48 LBS	5'	20 LBS
11'	44 LBS	4'	16 LBS
10.5'	42 LBS		

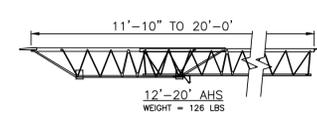
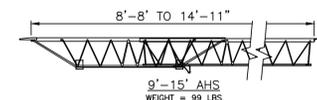
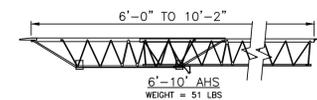
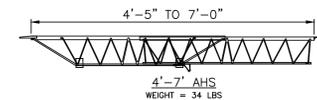
CMC ALUMINUM BEAM

LENGTH	WEIGHT	14'	90 LBS
24'	139.5 LBS	12'	77 LBS
20'	119 LBS	10'	64 LBS
18'	107 LBS	8'	51 LBS
16'	103 LBS	6'	38 LBS

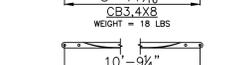
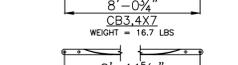
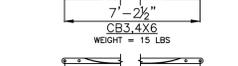
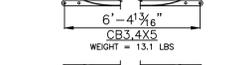
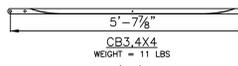
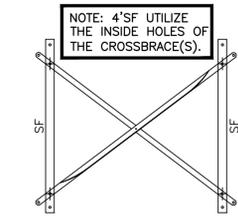
CMC ALUMINUM STRINGER

LENGTH	WEIGHT	11'	110 LBS
20'	200 LBS	10'	100 LBS
18'	180 LBS	9'	90 LBS
16'	160 LBS	8'	80 LBS
15'	150 LBS	7'	70 LBS
14'	140 LBS	6'	60 LBS
13'	130 LBS	5'	50 LBS
12'	120 LBS	4'	40 LBS

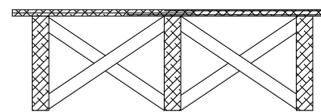
STEEL STRINGER



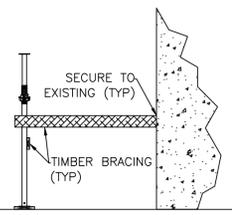
ADJ. HORIZONTAL SHORES (3" MINIMUM IS REQUIRED FOR STRIPPING)



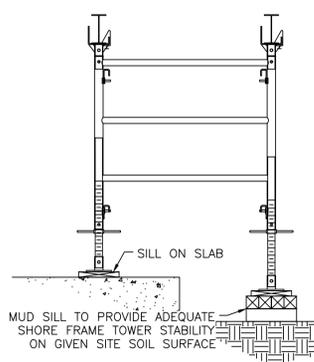
CROSS BRACES



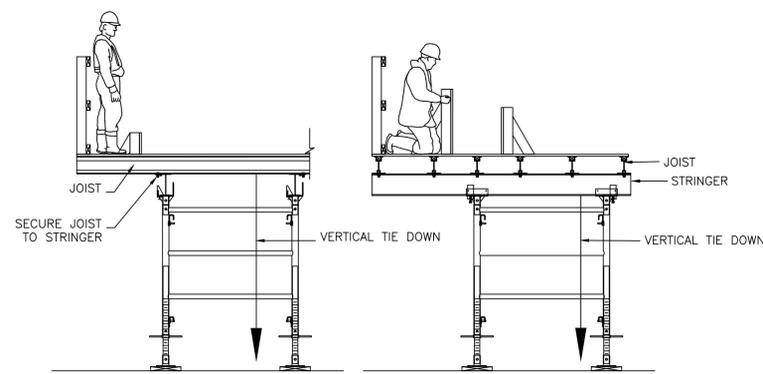
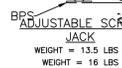
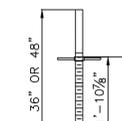
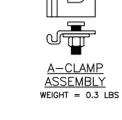
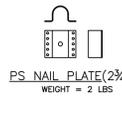
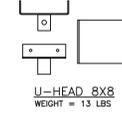
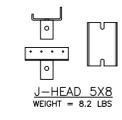
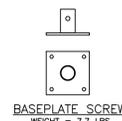
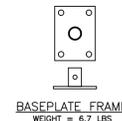
NOTE: IF DEPTH TO WIDTH RATIO IS 3:1 OR MORE, PROVIDE BRIDGING BETWEEN JOISTS TO PREVENT OVERTURNING.



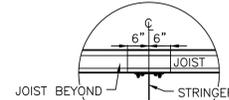
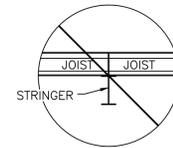
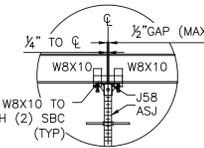
NOTE: POST SHORES MUST HAVE ADEQUATE BRACING PROVIDED IN (2) PERPENDICULAR DIRECTIONS MINIMUM. BRACING MUST BE INSTALLED AS THE SHORES ARE BEING ERECTED AND MUST BE SECURED TO EXISTING STRUCTURE(S) WHEN POSSIBLE.



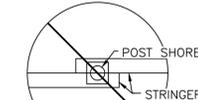
SILLS



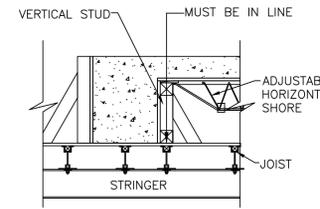
NOTE: DO NOT PLACE ANY LOAD ON CANTILEVERED ALUMINUM BEAMS, ALUMINUM JOISTS, AND W8x10 STRINGERS UNTIL BEAMS HAVE BEEN SECURED TO SUPPORT MEMBERS AND SUFFICIENT DEAD LOAD HAS BEEN PLACED ON THE INTERIOR SPAN(S) TO COUNTERBALANCE BY A 4:1 RATIO ALL ANTICIPATED LOADS ON CANTILEVER.



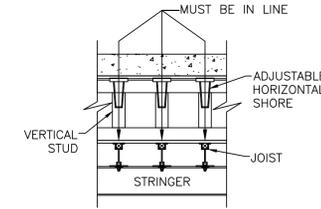
6" MIN. OVERLAP FOR SPLICED JOIST ON STRINGER



DO NOT OVERLAP STRINGERS ON A POST SHORE



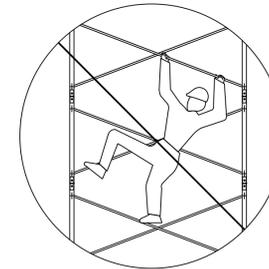
SECTION WITH JOISTS PARALLEL TO BEAM



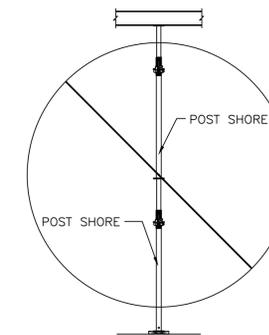
ELEVATION WITH JOISTS PERPENDICULAR TO BEAM

NOTE: WHEN SUPPORTING ADJUSTABLE HORIZONTAL SHORES, OR JOISTS FROM THE BEAM SIDE, THE VERTICAL STUDS AND JOISTS MUST BE ALIGNED TO TRANSFER LOAD DIRECTLY TO STRINGER

DO NOT USE CROSS BRACES TO CLIMB UP TOWERS



ALL CROSS BRACES MUST BE SECURELY FASTENED TO FRAMES



DO NOT STACK POST SHORES



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 (281) 597-5400
 www.CMCConstructionServices.com

BRANCH LOCATIONS

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CMC Construction Services
 Texas Registered Firm No. F-11625

HI LOAD LEGEND

- ACA = A-CLAMP ASSEMBLY
- AHS = ADJUSTABLE HORIZONTAL SHORE
- AJH = 2x6 ADJUSTABLE JOIST HANGER
- ASJ = ADJUSTABLE SCREW JACK
- BAR = BRACE AS REQUIRED (BY OTHERS)
- BPF = BASE PLATE FRAME
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- CAB = 6 1/2" ALUMINUM BEAM
- CAS = 8 7/8" ALUMINUM STRINGER
- CB = CROSSBRACE
- J58 = 5"x8" J-HEAD
- LBR = LATERAL BRACING BY CONTRACTOR
- PS = POST SHORE
- PNP = POST SHORE NAILER PLATE
- RHP = RIVET AND HITCH PIN
- SBC = STEEL BEAM CLAMP
- SF = SHORE FRAME
- TNP = TIMBER BRACE NAILER PLATE
- U48 = 4" X 8" DUO U-HEAD
- U88 = 8" X 8" U-HEAD ADAPTER
- UTW = U-HEAD TWO WAY
- UC = UNIVERSAL CONNECTOR
- V/F = VERSIFORM
- W = W8X10 STEEL BEAM
- ** = VERIFY DIMENSION
- N = SHORE TOWER (PLAN VIEW)

Hi-Load ID Sheet

THIS SHEET IS TO IDENTIFY AND SHOW COMMON PRACTICES ONLY. SEE ALL FOLLOWING DRAWINGS FOR JOB SPECIFIC DETAILS AND APPLICATIONS.

FOR
 JOB 916 CONGRESS
 LOCATION AUSTIN, TX

DATE	DWG NO
01/20/2017	C-05-17-116
REP.	JESSE RISTOW

HI-LOAD SHORING SAFETY SHEET

CMC Construction Services
 Texas Registered Firm No. F-11625



James L. Caldwell
 4-10-2017

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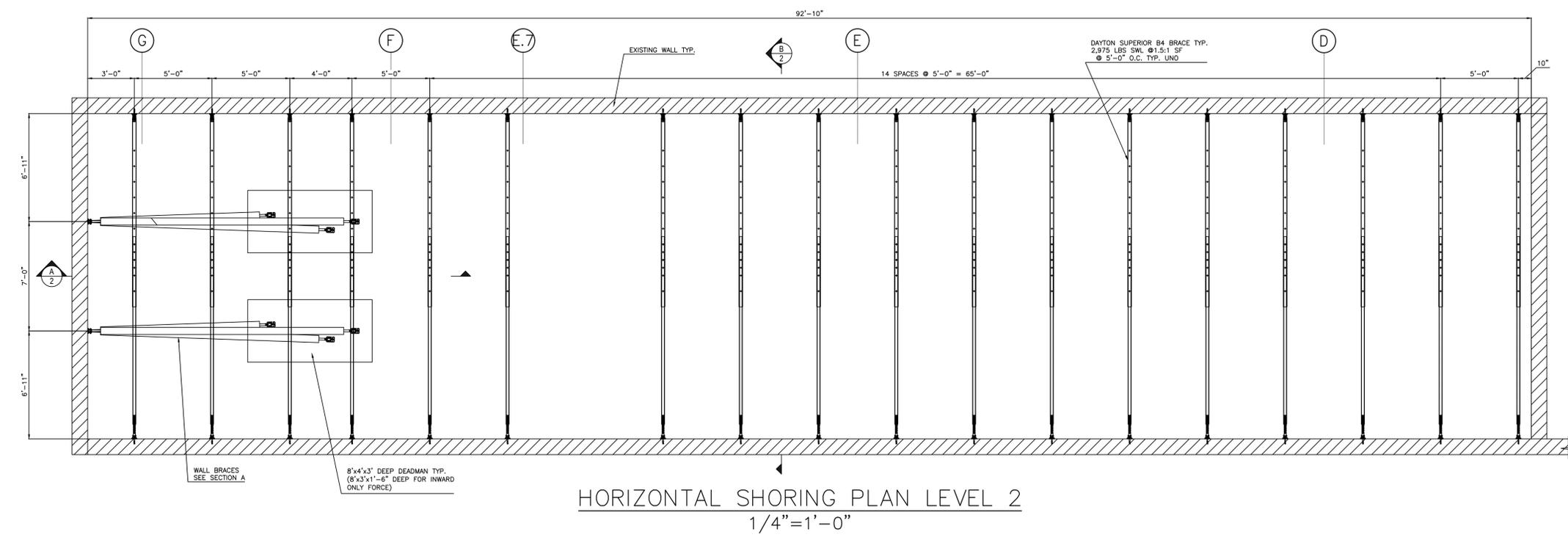
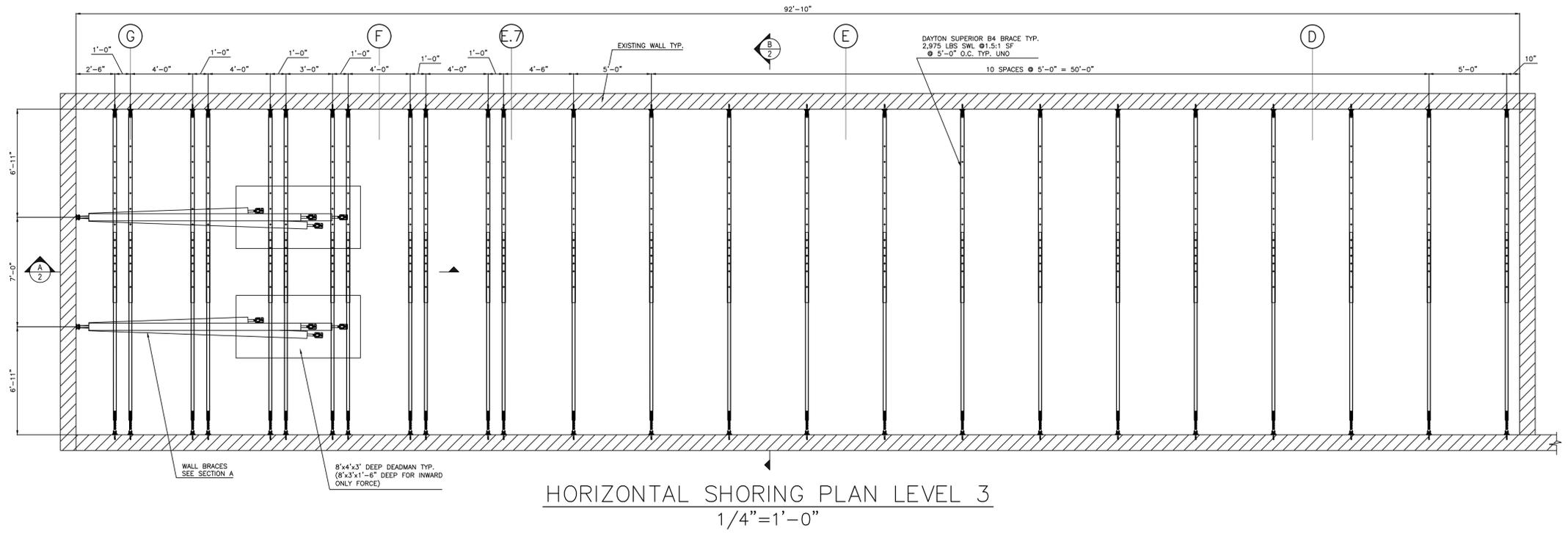
ISSUED BY: JLC DATE: 4-03-17
 APPROVED BY: _____ DATE: _____

#	DESCRIPTION	BY:	CHK:	DATE
1	CHANGED HORIZONTAL BRACES FROM SYMONS TO SUPER SLIM	JLC		1/31/17
2	CHANGED BRACES FROM SUPER SLIM TO SUPER 21	JLC		2/6/17
3	CHANGED BRACES FROM SUPER 21 TO B4 BRACE	JLC		4/3/17

FOR:
 JOB: 916 CONGRESS
 LOCATION: AUSTIN, TX

PAGE DESCRIPTION:
 BRACING PLAN

DRAWING #: C-05-17-116 DESIGNING BRANCH: DALLAS
 DESIGNED BY: JLC APPROVED BY: _____
 DATE DESIGNED: 01/20/2017 DATE APPROVED: _____
 REPRESENTATIVE: JESSE RISTOW SALES BRANCH: AUSTIN
 PLOTTED: 4/10/2017 9:42 AM



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DRAWING STATUS

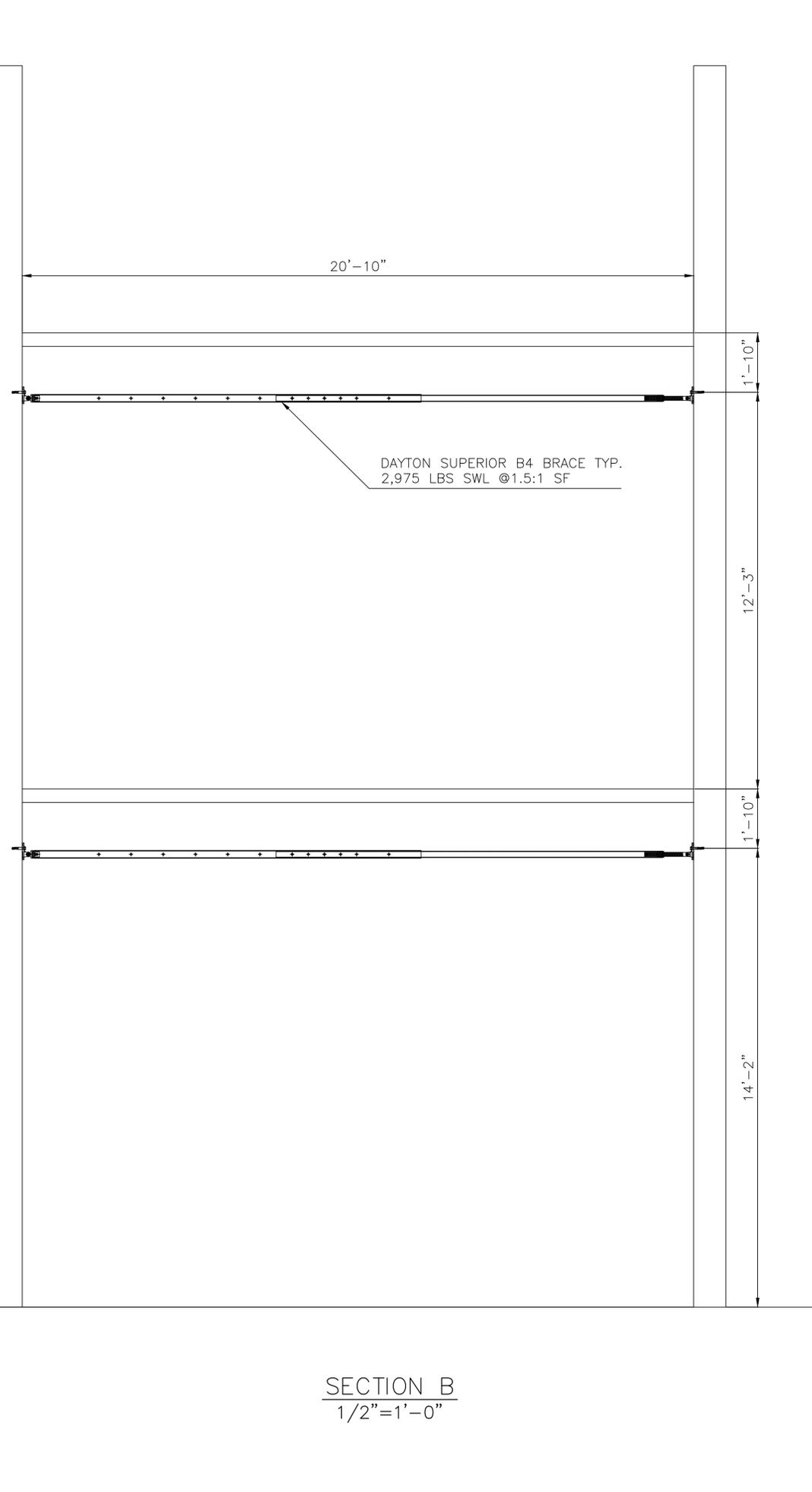
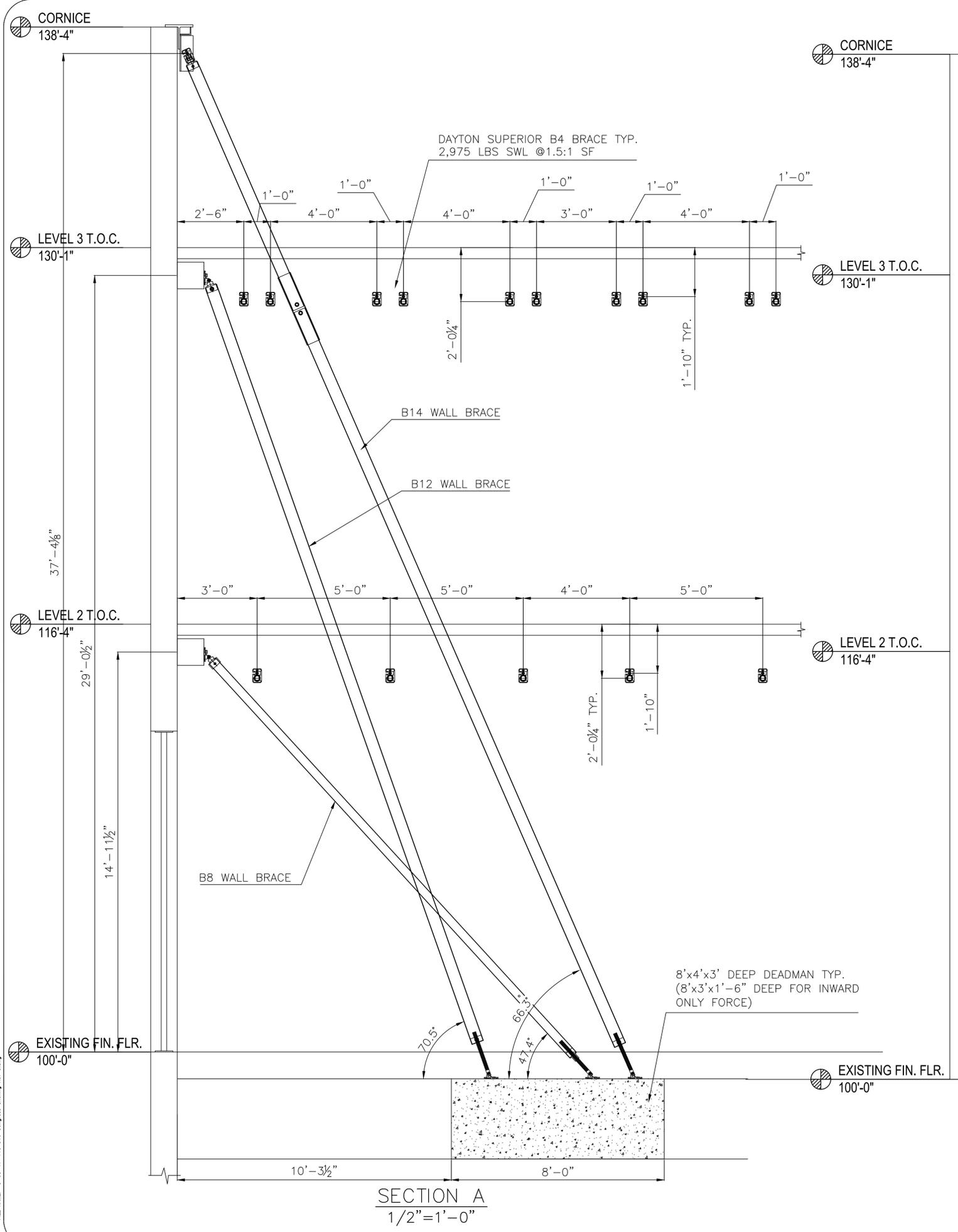
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 APPROVED BY: DATE:

#	DESCRIPTION	BY:	CHK:	DATE
1	CHANGED HORIZONTAL BRACES FROM SYMONS TO SUPER SLIM	JLC		1/31/17
2	CHANGED BRACES FROM SUPER SLIM TO SUPER 21	JLC		2/6/17
3	CHANGED BRACES FROM SUPER 21 TO BR BRACE	JLC		4/03/17

FOR:
 JOB: 916 CONGRESS
 LOCATION: AUSTIN, TX
 PAGE DESCRIPTION:
 BRACING SECTIONS

DRAWING #: C-05-17-116	DESIGNING BRANCH: DALLAS
DESIGNED BY: JLC	APPROVED BY:
DATE: 01/20/2017	DATE:
REPRESENTATIVE: JESSE RISTOW	SALES BRANCH: AUSTIN
PLOTTED: 4/10/2017 9:42 AM	

SHEET #: 2



SECTION A
 1/2"=1'-0"

SECTION B
 1/2"=1'-0"

FILE NAME: C-05-17-116 Congress Shoring Rev. 3.dwg